

Variable	Mean	Standard deviation	Minimum	Maximum	Skewness	Kurtosis	Jarque-Bera	Probability
Constant	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Age	35.5000	10.5000	20.0000	50.0000	-0.5000	3.0000	0.0000	0.0000
Age squared	1250.0000	100.0000	400.0000	2500.0000	0.5000	3.0000	0.0000	0.0000
Age cubed	43750.0000	1000.0000	8000.0000	125000.0000	0.5000	3.0000	0.0000	0.0000
Age to the fourth power	1562500.0000	10000.0000	160000.0000	6250000.0000	0.5000	3.0000	0.0000	0.0000
Age to the fifth power	55468750.0000	100000.0000	3200000.0000	312500000.0000	0.5000	3.0000	0.0000	0.0000
Age to the sixth power	1977656250.0000	1000000.0000	64000000.0000	1562500000.0000	0.5000	3.0000	0.0000	0.0000
Age to the seventh power	70234375000.0000	10000000.0000	2240000000.0000	78125000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the eighth power	2500000000000.0000	100000000.0000	80000000000.0000	3906250000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the ninth power	87890625000000.0000	1000000000.0000	2800000000000.0000	140625000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the tenth power	3125000000000000.0000	10000000000.0000	100000000000000.0000	5156250000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the eleventh power	110546875000000000.0000	100000000000.0000	35000000000000.0000	177812500000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the twelfth power	3906250000000000000.0000	1000000000000.0000	1280000000000000.0000	62500000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the thirteenth power	138281250000000000000.0000	10000000000000.0000	43000000000000000.0000	2187500000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the fourteenth power	4882812500000000000000.0000	100000000000000.0000	1500000000000000000.0000	75000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the fifteenth power	171875000000000000000000.0000	1000000000000000.0000	54000000000000000000.0000	3125000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the sixteenth power	6152343750000000000000000.0000	10000000000000000.0000	1920000000000000000000.0000	109375000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the seventeenth power	218750000000000000000000000.0000	100000000000000000.0000	68000000000000000000000.0000	4062500000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the eighteenth power	7812500000000000000000000000.0000	1000000000000000000.0000	24800000000000000000000000.0000	140625000000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the nineteenth power	274609375000000000000000000000.0000	10000000000000000000.0000	860000000000000000000000000.0000	5156250000000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the twentieth power	9765625000000000000000000000000.0000	100000000000000000000.0000	307000000000000000000000000000.0000	18750000000000000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the twenty-first power	347656250000000000000000000000000.0000	1000000000000000000000.0000	109000000000000000000000000000000.0000	675000000000000000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the twenty-second power	12500000000000000000000000000000000.0000	10000000000000000000000.0000	39800000000000000000000000000000000.0000	24414062500000000000000000000000000.0000	0.5000	3.0000	0.0000	0.0000
Age to the twenty-third power	4414062500000000000000							

PHIL TRIGIANI

Filed: March 12, 2001 Previous Examiner: J. Jacyna

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March 12, 2001

Assistant Commissioner
for Patents
Washington, DC 20231

Sir:

Kindly enter the following amendments and consider the following remarks.

On page 1, after the Title, delete:

"This application is a continuation-in-part of U.S. Patent Application 09/535,368, filed March 24, 2000, now pending, the entire contents of which are hereby incorporated by reference and relied upon."

TRIGIANI--CONTINUATION OF U.S. PATENT APPLICATION 09/557,831

and replace with:

--This application is a continuation of U.S. Patent Application 09/557,831, filed April 26, 2000, now pending, which is a continuation-in-part of U.S. Patent Application 09/535,368, filed March 24, 2000, now U.S. Patent 6,186,197, the entire contents of which are hereby incorporated by reference and relied upon.--

IN THE CLAIMS:

Kindly cancel claims 1-12.

Kindly add new claims 13-17, as follows:

--13. A canister for charging a closed, pressurized air conditioning or refrigeration system with a fluid, comprising:

a) a closed, non-pressurized cylindrical canister, wherein said canister has two ends, a first open end which connects to the system being charged and a second open end, and

wherein said first open end comprises a nozzle;

b) a predetermined amount of said fluid,

wherein said fluid is selected from the group consisting of a lubricant, a fluid dye for said air conditioning or refrigeration systems, and combinations thereof, and

wherein said fluid is maintained in said canister at about ambient pressure; and

c) a piston sealably disposed with said second open end of said canister,

wherein said canister is adapted to sealably and releasably connect to said pressurized air conditioning or refrigeration system via fluidly coupling means to form a closed binary system,

wherein said fluidly coupling means is a connector assembly having a first end connected to said nozzle of said canister and a second end connected to a service valve of the pressurized system,

wherein said connector assembly comprises:

- i) a flexible conduit,
 - ii) a thread on a first end of said flexible conduit, to engage with said nozzle of said canister,
- and

iii) a release valve on a second end of said flexible conduit, to engage with the service valve of the pressurized system, and

wherein said connector assembly further comprises a valve at one end of said flexible conduit, which prevents any material from back flushing into and contaminating said fluid in said canister.

14. The canister of claim 13, wherein said canister is fabricated out of transparent material and includes a plurality of gradient markings; and

wherein said nozzle is threaded.

15. The canister of claim 14, wherein said first open end comprises a threaded cap for engagement with said threaded nozzle.

16. The canister of claim 13, wherein said piston further comprises an O-ring.

17. The canister of claim 13, wherein said piston further comprises a recessed double O-ring.--

REMARKS

By this Preliminary Amendment, the specification has been amended, claims 1-12 have been canceled, and new claims 13-17 have been added.

More specifically, the specification has been updated to show the prosecution history of the parent patent applications. A replacement page with the replacement paragraph is attached hereto.

Claims 1-12 have been canceled and replaced with new claims 13-17. The new claims correspond to issued claims 1-5 in parent U.S. Patent 6,186,197. The expression "wherein said fluid is selected from the group consisting of a lubricant, a fluid dye for said air conditioning or refrigeration systems, and combinations thereof" has been added to new claim 1 (step b). Specific support for this amendment can be found, for example, on page 3, lines 19-20. A clean copy of the new claims is included in the attached Appendix. Thus, no new matter has been added by these amendments.


Early and favorable action on the merits are respectfully requested.

TRIGIANI--CONTINUATION OF U.S. PATENT APPLICATION 09/557,831

Should any matters remain in this application which might be resolved by interview, the Examiners is requested to telephone the undersigned at 570-386-5744.

Respectfully submitted,

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APPARATUS FOR DETECTING LEAKS IN A PRESSURIZED AIR CONDITIONING OR REFRIGERATION SYSTEM

This application is a continuation of U.S. Patent Application 09,557,831, filed April 26, 2000, now pending, which is a continuation-in-part of U.S. Patent Application 09/535,368, filed March 24, 2000, now U.S. Patent 6,186,197, the entire contents of which are hereby incorporated by reference and relied upon.

BACKGROUND OF THE INVENTION

Field of the Invention

The instant invention relates generally to the field of pressurized fluid systems and more specifically it relates to an apparatus for detecting leaks in a pressurized air conditioning or refrigeration system. The purpose of the apparatus is to provide the technician with a simple method of injecting a predetermined amount of a secondary fluid, e.g., a fluorescent dye, and/or lubricant into a pressurized system.

Description of the Prior Art

Numerous pressurized fluid systems have been provided in the prior art that are adapted to operate optimally within a certain pressure range. If the internal pressure falls below this range, the system needs to be recharged with an appropriate lubricant. While these units may be suitable for the particular purpose to which they address, they would not be as suitable for the purposes of the present invention as heretofore described.

APPENDIX

13. A canister for charging a closed, pressurized air conditioning or refrigeration system with a fluid, comprising:

a) a closed, non-pressurized cylindrical canister,

wherein said canister has two ends, a first open end which connects to the system being charged and a second open end, and

wherein said first open end comprises a nozzle;

b) a predetermined amount of said fluid,

wherein said fluid is selected from the group consisting of a lubricant, a fluid dye for said air conditioning or refrigeration systems, and combinations thereof, and

wherein said fluid is maintained in said canister at about ambient pressure; and

c) a piston sealably disposed with said second open end of said canister,

wherein said canister is adapted to sealably and releasably connect to said pressurized air conditioning or refrigeration system via fluidly coupling means to form a closed binary system,

wherein said fluidly coupling means is a connector assembly having a first end connected to said nozzle of said

canister and a second end connected to a service valve of the pressurized system,

wherein said connector assembly comprises:

- i) a flexible conduit,
- ii) a thread on a first end of said flexible conduit, to engage with said nozzle of said canister, and

- iii) a release valve on a second end of said flexible conduit, to engage with the service valve of the pressurized system, and

wherein said connector assembly further comprises a valve at one end of said flexible conduit, which prevents any material from back flushing into and contaminating said fluid in said canister.

14. The canister of claim 13, wherein said canister is fabricated out of transparent material and includes a plurality of gradient markings; and

wherein said nozzle is threaded.

15. The canister of claim 14, wherein said first open end comprises a threaded cap for engagement with said threaded nozzle.

16. The canister of claim 13, wherein said piston further comprises an O-ring.

17. The canister of claim 13, wherein said piston further comprises a recessed double O-ring.